

**To:** Forrest, Sabrina[Forrest.Sabrina@epa.gov]  
**From:** hboubberhan@csgov.com  
**Sent:** Fri 11/6/2015 2:47:26 PM  
**Subject:** Re: Fw: Recent Mineral and Arrastra Data

Thanks!

HANNA BOUBERHAN  
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Cc: "Parker, Robert" <Parker.Robert@epa.gov>  
Date: 11/06/2015 09:05 AM  
Subject: Fw: Recent Mineral and Arrastra Data

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**From:** Wall, Dan  
**Sent:** Thursday, November 5, 2015 9:34 AM  
**To:** Forrest, Sabrina; Parker, Robert  
**Subject:** FW: Recent Mineral and Arrastra Data

**From:** Peter Butler **Personal Address/Ex. 6**  
**Sent:** Thursday, November 05, 2015 8:58 AM  
**To:** Bill Simon; Steve Fearn; Wall, Dan; Larry Perino; Kirstin Brown; Scott Roberts; Lisa Richardson; Mary Blanchard  
**Subject:** Recent Mineral and Arrastra Data

Hi Folks – Here are the results of water samples we collected recently in the Mineral Creek basin and up high in Arrastra Gulch. Mainly we were after some of the Mineral Creek tributaries that currently are not included in any stream segment descriptions by the state.

A couple of observations: aluminum is very high towards the top of S. Mineral Creek, beginning above the Bandora on the east branch of the creek. The Bandora itself is pretty low in aluminum, but high in zinc. Seems like S. Mineral could be a good place to do a study on impacts of aluminum to aquatic life because there is little else in terms of high metals (a little bit with zinc below the Bandora). Aluminum concentrations get lower as one moves downstream.

Took a sample just above the bridge to Ophir Pass over the mainstem of Mineral Cr. in October. It almost met all table value standards. Right now this stream segment has no aquatic life classification. Probably should take some more samples and revisit that classification. The Middle Fork of Mineral pretty much wipes out any potential aquatic life downstream of this point to S. Mineral.

In Oct., the Royal Tiger was almost dry. Hard to imagine that it impacts Arrastra during low flow months.

Cheers.

Peter Butler

**Personal Phone/Ex. 6**

[attachment "Mineral Creek and Arrastra Data 2015.xls" deleted by Hanna Bouberrhan/AMER/CSGov]